2016
Major Automated Information System
Annual Report

Distributed Common Ground System-Army Increment 1 (DCGS-A Inc 1)

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MAIS Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
AoA - Analysis of Alternatives
ATO - Authority To Operate
APB - Acquisition Program Baseline
BY - Base Year
CAE - Component Acquisition Executive
CDD - Capability Development Document
CPD - Capability Production Document
DAE - Defense Acquisition Executive
DoD - Department of Defense
DoDAF - DoD Architecture Framework
FD - Full Deployment
FDD - Full Deployment Decision
FY - Fiscal Year
IA - Information Assurance
IATO - Interim Authority to Operate
ICD - Initial Capability Document
IEA - Information Enterprise Architecture
IOC - Initial Operational Capability
IP - Internet Protocol
IT - Information Technology
KPP - Key Performance Parameter
$M - Millions of Dollars
MAIS - Major Automated Information System
MAIS OE - MAIS Original Estimate
MAR – MAIS Annual Report
MDA - Milestone Decision Authority
MDD - Materiel Development Decision
MILCON - Military Construction
MS - Milestone
N/A - Not Applicable
O&S - Operating and Support
OSD - Office of the Secretary of Defense
PB - President’s Budget
RDT&E - Research, Development, Test, and Evaluation
SAE - Service Acquisition Executive
TBD - To Be Determined
TY - Then Year
U.S.C- United States Code
USD(AT&L) - Under Secretary of Defense for Acquisition, Technology, & Logistics

Program Information

Program Name

Distributed Common Ground System-Army Increment 1 (DCGS-A Inc 1)

DoD Component

Army

Responsible Office

Program Manager

COL Robert M Collins
Bldg 6006, C4ISR Complex
Aberdeen Proving Ground, MD 21005-0001

robert.m.collins4.mil@mail.mil

Phone: 443-861-2442
Fax:
DSN Phone: 848-2442
DSN Fax:
Date Assigned: June 25, 2014

References

MAIS Original Estimate

January 28, 2013

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 26, 2013

Program Description

Distributed Common Ground System–Army (DCGS-A) is the Army Service component of the DoD DCGS Family of Systems and the Defense Intelligence Information Enterprise. DCGS-A is the Army's primary system for Intelligence, Surveillance and Reconnaissance (ISR) tasking of sensors, posting of data, processing of information, and using intelligence information about threat, weather, and terrain at all echelons. DCGS-A provides the capabilities necessary for Commanders to access information, task organic sensors, and synchronize non-organic sensor assets with their organic assets. DCGS-A continuously acquires and synthesizes data from Joint, Interagency, Intergovernmental, and Multi-national sources that permits the Modular Force to maintain an updated and accurate understanding of the operational environment. It facilitates rapid planning, execution, and synchronization of all warfighting functions, providing the capability to operate within the enemy's decision cycle.

DCGS-A Increment 1 is the Army's ISR foundation layer, consists of two software releases, and will provide the following key capabilities:

- Provides enhanced access to data, information, and intelligence to support battlefield visualization and ISR management.
- Provides tactical time-critical data collaboration, production, and dissemination to combat commanders and staffs
- Provides fusion of correlated and uncorrelated data for integration into a Common Operational Picture
- Provides access to Imagery Intelligence, Signals Intelligence, Human Intelligence, Counterintelligence, Geospatial information, and weather data from all sources visualized on a single display.
- Enables the production of situational awarenss information and actionable information for Warfighting Commanders.
- Supports access to databases that include those managed by the Functional Managers: Defense Intelligence Agency, National Security Agency, National Geospatial-Intelligence Agency
- Provide sensor tasking and cross cueing, and direct downlink receipt.
- Provides user configurable alarms and alerts, visualization, dissemination, and targeting tools, all with Multi-Security Level access, to include up to Top Secret / Sensitive Compartmented Information

DCGS-A Increment 2 is the Army's follow on effort to Increment 1. With a planned MS B in 2016, Increment 2 will bring new and enhanced capabilities to meet current and emerging warfighter needs.

Business Case

Business Case Analysis, including the Analysis of Alternatives: Key functional requirements for this program (as articulated in the DCGS-A CDD), approved by the Joint Requirements Oversight Council (JROC) on October 31, 2005) are summarized as (1) fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoD Architecture Framework content, and must satisfy the technical requirements for transition to Net-Centric military operations; (2) have fusion capabilities to provide intelligence support throughout the full spectrum of operations to support force generation, situational understanding, targeting and information superiority; and (3) provide a mission reliability of 90% for a continuous 72-hour period.

Since the initial inception of the DCGS concept, the Army has completed a number of requirements and business case assessments. In 2002, the Army consolidated the critical requirements in nine families of fielded systems and included specific requirements to address sensor data receipt and Processing Exploitation and Dissemination (PED) in key future systems. The Army Training and Doctrine Command completed an Analysis of Requirements to insure all duplicative requirements were eliminated and consolidated within the DCGS-A program. The Army's Capability Review Board directed that DCGS-A integrate the capabilities of Joint Intelligence Operational Capability-Iraq, an emerging Quick Reaction Capability that provided an enterprise-based Intelligence, Surviellance,and Reconnaissance PED capability. There were multiple additional directed requirements and Joint Urgent Operational Needs Statements which shaped the early DCGS-A approach. In FY 2005, the MDA for the DCGS-A program, directed a Course of Action (COA) analysis (the equivalent of an Analysis of Alternatives) that considered the best approach (cost, schedule and performance) of five separate strategies. This COA analysis addressed both the DCGS-A, JROC-approved CDD, as well as the various Directed Requirements. The COA analysis recommendation was codified in an Acquisition Decision Memorandum, and was the basis of the April 7, 2007 Milestone B Acquisition Strategy. The Program Manager for DCGS-A developed a Cost Analysis Requirements Description (CARD) which provided the foundation on which Program Office and independent cost estimates were built. DCGS-A provided an updated Economic Analysis (EA) prior to the February 2012 MS C Information Technology Acquisition Board (ITAB) which provided further COA analysis referenced in the MS C ADM and MS C Acquisition Strategy. The CARD and EA were updated prior to the FDD ITAB in December 2012 and provided additional COA analysis/validation referenced in the FDD ADM (December 14, 2012) and FDD Acquisition Strategy update.

Firm, Fixed-Price Feasibility: The determination of the future development/integration contract type(s) will be based on cost and technical risk associated with satisfying the requirement.

When making the selection of contract type(s) to execute the program's next acquisition phase the MDA approved multiple contracts, both fixed-price and cost-type, consistent with the level of cost and technical risk associated with the effort.

Independent Cost Estimate: The program has not experienced a Critical Change which would induce the independent cost estimate required by 10 U.S.C. 2334(a)(6).

The Army Cost Review Board developed the FDD Army Cost Position (ACP), dated October 19, 2012, through the update of the February 9, 2012 MS C ACP. The update incorporated the changes to the program resulting from both the Army Force Design Update and the FY 2012 Letter of Authority for the DCGS-A enabled family of systems. The ACP was developed through the reconciliation of the DCGS-A Program Office Estimate and the Independent Cost Estimate developed by the Deputy Assistant Secretary of the Army (Cost and Economics). All estimates were based on the CARD which was approved on April 5, 2012. Army Program Analysis and Evaluation found DCGS-A to be adequately resourced and affordable on October 1, 2012 based on a comparison of the ACP and the Army's Budget Estimate Submission FY 2014-2018 dated September 2012.

Certification of Business Case Alignment; Explanation: I certify that all technical and business requirements have been reviewed and validated to ensure alignment with the business case. This certification is based on my review of the DCGS-A JROC-approved CPD, CARD, Acquisition Strategy, and the ACP.

Business Case Certification:

Name:	Mr. Stephen D. Kreider
Organization:	Army/PEO Intelligence, Electronic Warfare & Sensors for DCGS-A Inc 1
CAC Subject:	CN=KREIDER.STEPHEN.DANIEL.1030497062,OU=USA,OU=PKI,OU=DOD,O=U.S. GOVERNMENT,C=US
Date:	4/15/2013 05:38 PM

Program Status

Annual Report: The program is substantially on track to remain within the schedule, cost, and performance thresholds identified in the Original Estimate; there are no Significant or Critical Changes (as defined by 10 U.S.C. Chapter 144A) reported since the previous MAIS Annual Report to Congress.

The DCGS-A Inc 1 Acquisition Strategy was approved by USD(AT&L) on August 8, 2013. In compliance with the Chairman of the Joint Chiefs of Staff Instruction 3170.01G, DCGS-A Inc 1 is categorized as an Information System that provides capabilities through incremental software development and leverages commercial-off-the-shelf hardware to provide rapid execution of capability releases to satisfy the warfighter's operational needs based on proven technology. DCGS-A Inc 1 is structured as an agile and flexible program to provide early operational release of new capabilities and to accommodate changes driven by the Army's battlefield missions. Annual technology insertions, hardware refresh, and capability improvements provide the Army enhanced and/or new capabilities in a timely manner. In addition, the DCGS-A program office must integrate future capabilities provided by other DoD programs which are not mature at this time. These future capabilities will be included in a future DCGS-A Inc 2 when further defined.

A Follow-On Test and Evaluation was successfully completed in May 2015, during Network Integration Evaluation 15.2, for DCGS-A Inc 1 Release 2. The final Army Test and Evaluation Command report, released in 1st Quarter FY 2016, indicates DCGS-A Inc 1 Release 2 is suitable, effective, and survivable to the extent of Army network survivability.

Schedule

Schedule Events		
Events	**Original Estimate Objective**	**Current Estimate (Or Actual)**
Milestone B	Apr 2006	Apr 2006
Funds First Obligated	Dec 2007	Dec 2007
Milestone C	Feb 2012	Mar 2012
Full Deployment Decision	Sep 2012	Dec 2012
Full Deployment[1]	Sep 2019	Sep 2019

Memo

In October 2005, the Army Capability Review Board directed that the Joint Intelligence Operational Capability-Iraq Quick Reaction Capability and the Battle Command Interoperability Capabilities in the All Source Analysis System-Light be integrated into the DCGS-A program to accelerate development and provide support to the current GWOT operations. This integrated capability was the DCGS-A (V)3 baseline. DCGS-A (V)4 designated the effort to develop a vehicular-mounted Brigade Combat Team configuration. DCGS-A successfully completed MS B in April 2006 and was designated an ACAT III program. In December 2007, when the DAE designated DCGS-A as a pre-MAIS program (presumptive ACAT IAM), DCGS-A support to GWOT operations became DCGS-A (V)3 and remained an ACAT III program. DCGS-A (V)4 was re-named DCGS-A Mobile Basic. Funds were first authorized to be obligated for this pre-MAIS (presumptive ACAT IAM) program in December 2007. The DAE approved FDD on December 14, 2012. The MS C Information Technology Acquisition Board review was held February 29, 2012, and the DAE approved MS C on March 26, 2012. The current ACAT IAC (formally IAM) program is known as DCGS-A Increment 1.

1/ As defined in the FDD ADM, Objective and Threshold dates for FD are September 2019 and September 2020 respectively. The one-year threshold for this milestone reflects the higher-than-normal risk inherent in this long-term outyear event.

Acronyms and Abbreviations

ACAT - Acquisition Category
GWOT - Global War On Terror
V - Version

Performance

Performance Characteristics		
Original Estimate Objective/Threshold		**Current Estimate (Or Actual)**
Net-Ready		
(Objective = Threshold) The system must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: I) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges, 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD lEA, excepting tactical and non-IP communications, 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-I and implementation guidance of GESP necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views, 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, and issuance of an IATO or ATO by the DAA, and 5) Supportability requirements to include SAASM, Spectrum and JTRS requirements.	The system must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: I) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges, 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD lEA, excepting tactical and non-IP communications, 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-I and implementation guidance of GESP necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views, 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, and issuance of an IATO or ATO by the DAA, and 5) Supportability requirements to include SAASM, Spectrum and JTRS requirements.	Met Threshold
Fusion		
(Objective = Threshold) DCGS-A shall have fusion capabilities to provide intelligence support throughout the full spectrum of operations to support force generation, situational understanding, targeting and information superiority. To do this, DCGS-A shall be capable of performing the following automated fusion functions: semi-computer controlled (a combination of human and computer interaction) preprocessing of source information to organize collected sensor and human source data into usable, normalized (readable by the users) forms (Fusion Level 0); computer assisted fusion that tells the user what the sensor detected (human, tank, building, etc.) and also tells the user if the entity is new or known (Fusion Level 1); and	DCGS-A shall have fusion capabilities to provide intelligence support throughout the full spectrum of operations to support force generation, situational understanding, targeting and information superiority. To do this, DCGS-A shall be capable of performing the following automated fusion functions: semi-computer controlled (a combination of human and computer interaction) preprocessing of source information to organize collected sensor and human source data into usable, normalized (readable by the users) forms (Fusion Level 0); computer assisted fusion that tells the user what the sensor detected (human, tank, building, etc.) and also tells the user if the entity is new or known (Fusion Level 1); and computer assisted situation	Met Threshold

computer assisted situation refinement to determine an entity's members, subordinates and associations (Fusion Level 2).	refinement to determine an entity's members, subordinates and associations (Fusion Level 2).	

Memo

The APB reflects objective and threshold values for KPPs over the life of the program. KPPs represent those attributes or characteristics of the system that are considered critical or essential to the DCGS-A program and to the development of an effective military capability. A KPP normally has a threshold, representing the required value, and an objective, representing the desired value. In order to provide the flexibility to take advantage of rapidly evolving information technology, DCGS-A follows the IT Box model as defined by the Joint Capabilities Integration and Development System Manual, dated January 19, 2012. In the IT Box, Objective values are not used because it is understood that performance will evolve beyond the Threshold values over time. Therefore, the Threshold values in the Performance table (above) are the Minimum Required Initial Capabilities for the two KPPs.

Acronyms and Abbreviations

DAA - Designated Approval Authority
GESP - GIG Enterprise Service Profiles
GIG - Global Information Grid
JTRS - Joint Tactical Radio System
SAASM - Selective Availability Anti-Spoofing Module
TV - Technical View

Cost

DCGS-A Inc 1				
Appropriation Category	BY 2012 $M		TY $M	
	Original Estimate	Current Estimate Or Actual	Original Estimate	Current Estimate Or Actual
Acquisition Cost				
RDT&E	807.3	805.0	784.6	782.3
Procurement	4353.7	3109.8	4858.3	3231.6
MILCON	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0
Total Acquisition Cost	5161.0	3914.8	5642.9	4013.9
Operating and Support (O&S) Cost				
Total Operating and Support (O&S) Cost	3735.0	3735.0	4569.5	4569.5
Total Life-Cycle Cost				
Total Life-Cycle Cost	8896.0	7649.8	10212.4	8583.4

Cost Notes

1. This report and the Budget Year IT-1 Exhibit cover different time periods thus the costs will not match.
2. Then Year dollars are included for information purposes only; cost variances will be reported against Base Year dollars.
3. The O&S costs reflect all work performed during that phase, regardless of the type or source of funding.